Contemporary Drug Education

WITH CHANGES IN ATTITUDES AND LAWS, DRUG EDUCATION MUST BE RE-EVALUATED
# CONTEMPORARY DRUG EDUCATION

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Supportive materials for parents, publications for youth on impact of changes in marijuana laws, and a brief description of marijuana use and risks, are available on our website [www.envrc.org](http://www.envrc.org), and are commented on in this document.
SCHOOLS AND THEIR APPROACH TO DRUG ABUSE PREVENTION

A unique aspect of American culture involves community expectations that local school districts should take the lead in responding to any serious public concern involving young people. From vaccination sites to racial integration, the public looks to the local school.

This requires school districts to define and clearly express what they can and cannot be expected to provide. This is especially true in the controversial and evolving area of alcohol, marijuana and other drug use.

Regarding use of drugs, marijuana is the contemporary lightning-rod issue. Like alcohol, its use is institutionalized. The role of the school district is to help truthfully educate and persuade students to avoid use, but with a focus on identifying and preventing abuse. Coming to terms with how that responsibility can be honored is, now more than ever, both necessary and challenging. Marijuana use patterns, public sentiments, and laws are changing rapidly. This requires school programs to also refocus if they wish to remain relevant and protect young people from harm.

For 50 years or so, substance use and abuse education has been provided. That is also about how long our organization, The Environmental Resource Council (formerly the Minnesota Institute of Public Health), has been working with federal and state agencies, courts, and school districts on issues of health and safety relative to alcohol and other drugs. What follows is our perspective on drug education. We realize that with a subject this sensitive, each district, school and even classroom needs to craft their own approach to this educational challenge. Yet some clear guiding principles are necessary.

We know there are institutional investments, as well as community expectations and established traditions, with certain historical “drug education” approaches. Consequently, public sentiments and stereotypes need to be taken into consideration. Those traditions and values, along with knowledge of changes in laws, use patterns, health issues, and public attitudes, are important. Rethinking how schools deal with alcohol and other drugs, especially marijuana, is an educational and ethical challenge, but necessary.

‘...marijuana is the contemporary lightning-rod issue’
RELEVANT DRUG EDUCATION

The American school teaches children to think; it is neither an arm of law enforcement nor a substance abuse therapy provider.

A school is at its best when operating a bit like a quality parent—educating, guiding and persuading a student to his or her advantage. As the evolving institutionalization/legalization of marijuana changes the landscape of drug use, how schools adjust their approach to marijuana and other drug issues, including alcohol, requires re-evaluation.

It is now an accepted reality that marijuana, like alcohol, is a part of the world into which our children mature\(^1\). There are associated risks, which thoughtful education programming has a responsibility to address and diminish. There is also the reality that marijuana use by adults is lawful in some states and accepted in much of the Western World.

In our view, there are certain features that school drug education should and should not employ, and some educational aspects that have special value in this period of confusion and transition.

Programming should be guided by three principles:

1) to understand and work with reality in terms of risk

2) be sensitive to, but not dominated by, past drug education traditions

3) teach the truth as we are given to understand the truth.

What We Believe

Schools SHOULD NOT Do

Do Not Subordinate Responsibility to Law Enforcement Agencies

A quality relationship with local law enforcement is valuable, for example in managing the delicate issues involved with child protection. However, the fundamental culture and style involved in enforcing criminal law is often at a mismatch with education. Identifying and arresting a drug dealer operating within the school is different from realistically communicating the nature of intoxication and quantifying related health and safety risks.

Law enforcement can uphold drug laws as well as contribute within the context of an educational dynamic, but a line is crossed when law enforcement dominates the drug education experience. How a young adult best thrives in a world that has “normalized” recreational intoxication is not dictated by the criminal code (see our attachment on the D.A.R.E. program).

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\(^1\)A majority of younger American adults have tried marijuana (women: 50% +; men: 60% +), with the National Academy of Science reporting that over 1 in 12 American adults uses marijuana on a monthly basis as of 2012).
DO NOT INCORPORATE QUASI-THERAPY PROGRAMS AS EDUCATION

Selectively reaching out to students who suffer from substance dependency, compulsive or addictive use through a counseling-based assessment has become an accepted role of many school districts. In some states, vigilance for problems and a therapeutic assessment and response is mandated by statute.

Therapy, by definition, is designed to create dynamic and fundamentally profound changes within a person’s life. The therapeutic process is often traumatic and strives for behavioral and personality changes. Incorporating life-changing therapeutic interactions as a standard component of the drug education experience is not a responsive approach for schools.

Mini-treatment is not education. However, discussions regarding addiction or chemical dependency and the recovery process are valuable and appropriate.

DO NOT COMMUNICATE BY RECITING FACTS

The pursuit of intoxication is personal, powerful, and can involve intensely pleasurable or outright life-threatening behavior. Dispassionately presenting technical information that focuses on chemical and biological aspects of drugs alone will not penetrate the magical/emotional “teenage Friday night.” Impacting real decision-making is exactly what should be happening. There should be acknowledgment that intoxication can bring pleasure as well as promote dangerous behavior, create health problems, and contribute toward social dysfunction. This absolute paradox needs to be imprinted onto the minds of students. The intoxication duality of pleasure and risk should be presented in a way that will be remembered and believed, thereby influencing behavior and preventing harm.

“\nThis is one topic that needs to go beyond seemingly remote information.\n”

This educational dynamic should be relevant to realistic motivations and the students’ world. This is one topic that needs to go beyond seemingly remote information, easily detached from personal behavioral options.

WHAT WE BELIEVE SCHOOLS SHOULD DO

CREATE A REALISTIC DRUG POLICY AND AN AGE-SENSITIVE EDUCATION PLAN

The school district should establish a realistic education plan, complemented by a drug policy that allows for unique situations, relies on common sense, and offers administrative options.

The use/possession policy and education plan should be compatible but centered primarily on the education component. An established relationship to law enforcement—and professional substance abuse assessment and treatment—may make sense, but the educator’s objectives should clearly drive the programming. The education plan should thoughtfully progress through grades K-12 and include ongoing third-party evaluation and student feedback loops.

INSTITUTIONALIZE REALITY CHECKS

Through focus groups or confidential surveys, students should be asked to provide information regarding their use of and/or exposure to alcohol, marijuana and other drugs, and especially their reaction to the drug education experience over time. There are well-vetted information collection formats that can be modified and used as a baseline.²

The two primary questions that need to be answered are, first, “Do you believe that the information sets and concepts are accurate and honest?” and, second, “Does or will the educational experience impact your real-life behavior?”

**Involve and Support Parents**

The clearest researched postulate regarding preventing young adult substance abuse is that parents/guardians have the most power to prevent harm. The most consistent element in preventing use and abuse involves the concern of young people regarding “disappointing” their parents. To the extent the school district can support this parent/child dynamic, everyone benefits.

A booklet for parents, *Marijuana and the Responsible Parent* is free and available at [www.envrc.org](http://www.envrc.org). The booklet may complement the school’s drug education effort, or offer stand-alone value to parents through its approaches and perceptions on parent interaction.

While law enforcement personnel can strictly enforce the law, and the therapeutic community can address addiction or “chemical dependency,” families and schools are the principal institutions for guiding, enlightening, and ultimately influencing young people.

“Family” is by far the most powerful player in making a difference. It is important for parents to understand their powerful influence and become motivated and supported in using that influence. Where parents won’t or can’t be part of the process, the school’s historic role of “in loco parentis,” or taking on some of the responsibilities of parents, kicks in. Law enforcement and therapy have a place, but learning to thrive in a world where recreational intoxication is part of life as a source of pleasure, as well as risk, is primarily a matter for trusted, caring and knowledgeable adults connecting with young people.
Part of the new reality is that virtually every 14-year-old in America is aware that marijuana is being both widely used and legalized for medical and/or adult recreational use.

How changes in drug laws and culture are addressed is important. Standing mute on the marijuana issue is not an option. Some understanding of the evolution of marijuana policies may be helpful.

Marijuana and the War on Drugs

In 1970, in reaction to what the federal government had termed, “the marijuana epidemic,” President Richard Nixon appointed a prestigious commission that included leading American academics in medicine, pharmacy, and the behavioral sciences. They were charged with providing an assessment of what effect marijuana use was having or likely to have in the United States.

Also in 1970, for the first time in American history, marijuana use became a Schedule I illicit drug in the same criminal justice category as heroin.

The President’s Commission was expected to present an outline for a national “War on Drugs,” focusing on marijuana. However, in 1972, when the 183-page report of this National Commission on Marijuana and Drug Abuse was released, it began with a curious quotation from Harvard philosopher and educator, Alfred North Whitehead:

There are no whole truths; all truths are half-truths. It is trying to treat them as whole truths that pays the devil.

The report included several unanticipated findings, including the determination that marijuana use, as near as science could determine, created an “…inverse or negative statistical correlation to violence.”

Significantly, the report warned against the establishment of a “polarizing” law enforcement bureaucracy charged with unrealistic challenges.

The report predicted that such an approach would be comparable to past failed and socially corrupting alcohol prohibitions. More than one chapter discussed the limits and potential social problems, with a default to criminal prohibition.

The importance of school drug education was stressed. One specific recommendation was that the nation’s school drug education...
programs be continually evaluated. The Commission found much school drug education “irrelevant,” “misleading,” and “of questionable value.” It also requested that the states review how their school districts approached drug education.

A year after the federal report was released, our organization (then named The Minnesota Institute of Public Health) was contracted by the State of Minnesota to present a description to the Governor’s Office and State Legislature regarding options for the state in light of the federal report.

We recommended decriminalization of possession of a “small amount” of marijuana (defined as around 20 marijuana cigarettes), and requiring drug education program participation for those found in possession of a small amount, in lieu of incarceration or mandated drug abuse therapy.

While marijuana possession would still be illegal, we supported the elimination of any permanent criminal record if the small amount possession offense was not repeated. Our recommendations were accepted and, while possession of a small amount in Minnesota was still a violation of state law, it was treated more on the order of a traffic ticket. If the violator attended an approved drug education class and was not found in possession a second time, they would not be stigmatized as “criminals.” We subsequently entered into contract with the State of Minnesota to establish and maintain a statewide network of drug education classes for violators, working in coordination with the State Supreme Court.

Among other things, it had become obvious in our research that Minnesota’s marijuana law was being selectively enforced, based primarily on interviews with police officers. Essentially, so many young adults were using marijuana that law enforcement officers sometimes selected which individuals would be arrested. For example, protesters at anti-Vietnam War rallies were often targeted and arrested for marijuana possession, as were a disproportionate number of young people of color. During one focus group involving law enforcement, one suburban police officer misunderstood our question regarding selective enforcement and began listing the types and even names of people whom he intended to arrest under the State’s marijuana possession law. His list was based on dynamics other than marijuana possession, including social status.

The National Commission’s report was never officially acknowledged by Pres. Nixon, but the Minnesota law for decriminalization of small-amount marijuana possession did go into effect. Consequently, thousands of these cases in Minnesota were handled through attendance at drug education classes around the state, as opposed to incarceration in a jail or the county workhouse. This approach saved substantial tax dollars and avoided undermining the violator’s career development, i.e. they would not have to list a criminal conviction on an employment application, be limited in post-secondary education options, or denied entry into a union.

Our education program continued quietly for over 25 years. In our direct dealings with thousands of “small amount” violators, we became convinced that drug education in schools at that time was often profoundly out of touch.

In the 1980s, during the Reagan Administration, First Lady Nancy Reagan officially led the national “War on Drugs.” Strict enforcement of all drug laws, including those...
regarding marijuana, became federal policy. Without any formal declaration of martial law, the military was used to help enforce local drug laws, causing concern among Civil Libertarians. In some states, military units were dispatched in full battle gear, sometimes using military aircraft, to locate and destroy marijuana patches. In the past, this was a task effectively handled without incident by the part-time county weed inspector using a corn knife. A strong concern emerged that the “War on Drugs” was overreacting.

In schools, drug education often profoundly overstated medical risks. Federal programming encouraged adoption of a “zero tolerance” policy for any possession. Assessment for counseling needs, or second chances due to mitigating circumstances, were recommended to be “off the table.” It is important to note that many school districts did not comply with the federal guidelines, sometimes to their financial disadvantage.

Throughout this surrealistic “war,” to the extent one can rely on self-reported marijuana use, it appeared that 40–50% of graduating high school seniors were trying marijuana. This threshold of use remained relatively consistent over time. By age 19, over half this age group reported using marijuana. In 2014, within the 19–30 year old age group, 56.3% of American females and 61% of males reported unlawful use of marijuana.

In reality we suspect the use rates were higher. Asking young people to admit on a government form to violating a law, even anonymously, could of course be subject to the “Hawthorne effect”—the well documented under-reporting of socially undesirable behaviors. Whatever the actual number, a clear majority of young adult Americans were and are using marijuana, in violation of drug laws.

In the 1970s and ‘80s, three future presidents violated drug laws, and marijuana became considerably easier to obtain than beer by high school seniors.³

**Default to Law Enforcement**

The fundamental concept behind the “War on Drugs” was that those who used any illegal drug were aberrant and needed to be handled with “no tolerance,” as criminals. Responding to illegal drugs became an affair of criminal justice. Consequently, schools were under pressure to simply lateral their drug programming over to law enforcement.

There were several programmatic approaches with this default to law enforcement. One way was to have a local representative from municipal, county, or state law enforcement make a classroom presentation. Typically, there were instructional kits, including examples of what drugs look like, and occasionally slide shows focusing on young people being arrested, stigmatized, or physically harmed by drug use.

Another approach involved a charismatic person, typically representing law enforcement, speaking to an assembled student body, dramatically portraying the use of drugs as prima facie aberrant.

One presentation the author observed took place in an affluent suburb in the mid-1980s. It was provided by a former law officer who had a “cop” television program named after him. His travel and speaking fees were paid by an individual running for the school board, partially on an anti-drug platform. The highly energetic, almost evangelical, former police officer described acts of drug induced depravity that were gruesome to the point where some students became ill. He assured the entire student body that even minimal use of marijuana would lead to birth defects among the students’ children later in life. One of the students in the audience actually turned white and fainted as the presenter described “grossly deformed offspring” resulting from marijuana use.

³Monitoring the Future; National Survey Results on Drugs Use - The National Institute on Drug Abuse, 2014, Volume 2, Page 101
of the way and turn this issue over to criminal justice.

The erratic nature of these and other presentations and programs was eventually replaced almost universally by D.A.R.E. This involved a more structured, community-wide effort with trained law enforcement presenters and standardized law enforcement-oriented protocol. A majority of school districts in America adopted D.A.R.E. (D.A.R.E. estimated a national participation rate of 75%).

Responsible research clearly demonstrated that D.A.R.E. of this period was not only ineffective in reducing illegal drug use and abuse, but also was damaging to some participants. A detailed history of this program is discussed in the Attachment, describing how it succeeded operationally but failed programmatically. Understanding and learning about this past approach is especially important as marijuana laws change for adults but remain illegal for young people. Consequently, there are calls for, and possibly money available annually from, lawful marijuana sales to enable enhanced, school-based drug education.

The point is, educating and persuading young people to avoid the use and misuse of any form of intoxicant, including those that they are most likely to confront—alcohol and marijuana—are best handled by parents and educators. These caring adults are typically trusted and have the ability to develop the skills for explaining drug use and misuse in ways that will be accepted as realistic and relevant to a young adult’s world.

The legalization of marijuana use for adults in some states, and its virtual institutionalization in society, is real. It is simply wrong not to provide realistic warnings of risk. If the warnings are going to make a difference, they need to be based on reality and communicated through honest and respectful concern.

**Contemporary Profile of Marijuana Use and Health**

In 1970, marijuana became a Schedule I Substance under federal law, placing it in the same category as heroin and prohibiting research for medical use. In spite of the fact that a number of states have legalized both medical and recreational use, it still remains a Federal Schedule I Substance. This means that research regarding potential medical value or risk has been prohibited in the United States. This has created confusion regarding exactly what risks and values can be attributed to marijuana use, both as a recreational drug and as a medicine.

In 2017, several respected private research and policy organizations in the United States published a combined description of the current understanding of marijuana and health consequences. This effort involved the National Academies of Sciences, Engineering, and Medicine.

They analyzed more than 10,000 published studies, often from countries other than the United States, and issued a 337-page analysis.

After lamenting the research restrictions imposed by the United States, Dr. Marie McCormick, Chair of the National Science Committee and Professor of Pediatrics at Harvard Medical School, released the report. Their key findings are listed on the next page.
A Summary of the 2017 Findings of the National Academies of Science, Engineering and Medicine*

1. Marijuana has medical value in pain reduction involving muscle spasms, especially related to multiple sclerosis and cancer patients experiencing chemotherapy-induced nausea and vomiting.

2. There is no evidence that smoking marijuana increases the risk of cancer, such as consequent to tobacco use.

3. Smoking marijuana on a regular basis may aggravate bronchitis and chronic coughing.

4. Smoking marijuana by individuals with heart disease may increase risk of cardiovascular complications.

5. There is some evidence (conflicting) that smoking marijuana during pregnancy positively correlates with lower birth weight.

6. Some mental health problems such as schizophrenia are concurrent with use of marijuana. Marijuana may or may not “cause” the schizophrenia. Possibly, those with schizophrenic tendencies may seek marijuana intoxication as a form of self-medication. Permitting additional research in this area would be important.

7. Injury or death occurring while a person is intoxicated, particularly operating a motor vehicle, is a risk associated with marijuana use.

8. The use of other more physically dangerous chemicals correlates with marijuana use. This includes alcohol misuse, the use of tobacco products, and the use of other drugs. Whether the marijuana use is causative or statistically concurrent with the use of other drugs is not understood.

9. The use, especially heavy use, by adolescents, is associated with both academic performance problems and socialization problems. Again, both may be concurrent as opposed to causative.

10. Chronic and compulsive use can evolve into dependency problems, with adolescents being especially at risk.

OUR PERSPECTIVE ON DRUG EDUCATION

Those trying to help young people honestly and safely come to terms with alcohol, marijuana and other drugs have a unique but critical challenge.

First, their approach needs to connect with reality if they truly intend to be of meaningful value to students. The reality is that most adults use, at least alcohol, in ways that are not harmful. There also are many adults who see the responsible use of intoxicants as complementing a quality of life. However, it is also a reality that there is abuse and subsequent harm consequent to the use of intoxicants, especially among young adults. The obvious goal is to acknowledge the use and risk, and then get across to students the specifics of both in ways that will best protect them.

Young people instinctively take a fresh and, in a way, refreshing, look at the world around them and are especially offended by hypocrisy. Substantial research findings pick up a sense of disbelief and even hostility among young people when presented with war on drugs-type educational programs. There are good reasons for helping young people avoid any intoxication. The “just say no,” or “because I said so,” approach may seem to work for elementary or possibly middle school students. This approach will not have any reasonable chance of being blindly accepted in a typical population of American high school students.

Appropriate warnings are necessary, but they need to be communicated in a way that avoids even the appearance of hypocrisy.

Here are three conceptual principles that we believe should guide communications to young people about alcohol, marijuana, and other drugs:

1. Intoxication is part of our society and there are many responsible adult users, as well as many who make a decision not to use.

2. Danger, sorrow, and disease are often consequences of misuse, and the nature of that misuse needs to be understood so it can be avoided.

3. Young adults are at special risk; consequently, use by them is particularly dangerous and understandably prohibited by custom and by law. This understandable prohibition includes alcohol, tobacco, and marijuana.
FIVE CRITICAL WARNINGS

It is important that five specific areas of harm and risk be communicated.

1 Overdose

One high-impact discussion of the dark side of intoxication concerns the tragedy of “overdose,” which here relates to death through the intake of too much of one, or often more than one, type of drug.

By definition, chemical intoxicants impact the central nervous system, targeting brain function. A heavy dose of a number of drugs, especially drugs used in combination with each other, may overwhelm the central nervous system and can literally shut down a brain’s ability to control life functions, including breathing. Death from misuse is a frequent reality. Marijuana itself is not connected with overdose directly; however, since it impairs judgment, other drugs, especially alcohol, may be recklessly used in conjunction with marijuana, creating intoxication at life-threatening dosages.

By far, the highest incidence of drug overdose causing permanent disability and often death relates to an inexperienced young person’s exposure to heavy doses of alcohol in a short period of time.

Each day in 2014, six Americans, usually young adults, died from alcohol poisoning. Heavy use of alcohol can, and often does, shut down bodily organs, creating permanent damage or death, generally through suffocation.

You can check your local media to find recent examples. This discussion not only helps set an important tone, including drugs and danger, but also offers genuinely life-saving information.

The high incidence of alcohol overdose relates to the comparatively thin line between heavy social and lethal doses. Depending on body size and metabolism, three high-alcohol content recreational drinks will typically cause definable intoxication. Three more could likely make a person ill, and three after that may constitute potentially life-threatening alcohol poisoning.

2 Dangerous Behaviors

A second danger, both obvious and definable through a scan of local media, involves dangerous behavior and resulting tragedy due to being intoxicated. Driving accidents, hunting accidents, drowning or violence can all be a consequence of alcohol and drug related impaired judgment. Local media often carry stories that bring home the reality of intoxication and behavioral risk. The greatest threat relating to alcohol and marijuana use is quite likely impaired driving.
3 Addiction/Dependency
A third significant category of risk involves compulsive use of any drug, including alcohol and marijuana. This use pattern creates a condition professionally described by clinicians as a “disease,” causing harm to the user, to friends and family, and to society.

It needs to be emphasized that not all people who use are on a sort of pre-destined spiral toward compulsive addiction or diseased use. However, an unhealthy, dangerous and destructive dependency upon the state of intoxication is real and remains a potential risk for those who use.

Every young adult understands something about alcoholism and addiction, and their consequences. Those tragic conditions are common in literature, the media, and life.

Here, too, it will not be difficult to find locally-significant information or moving descriptions of chemical dependency, possibly from an articulate recovering individual or someone who has been harmed by another person’s compulsive use.

4 Misuse of Pharmaceutical Pain Killers
The post-2000 prescription use of opiate-type painkillers (Opana, Fentanyl and Oxycontin) has progressively increased. By 2010, by some estimates, every adult American could be medicated for a month\(^5\). Painkiller use often leads to unprescribed medical opiates and or illegal heroin use. The fact that a drug is technically a “medicine” does not mean that it cannot be harmful. A steady increase in opiate-related drug use (16% in 2014) is occurring with proportionally greater increases in debilitating opiate addiction. The key point is, “medicine” can be as dangerous as any other drug.

5 Social Stigma
In our experience, the communications that seemed to have the most thought provoking impact among students related to socially embarrassing or socially degrading behavior. Social stigma was a terrifying and real threat to which they quickly related.

For many years, we provided public health anti-tobacco warnings to young people. In that process, we discovered that enumerating health consequences, costs, and physical addiction messages had only marginal impact.

The message that had overwhelming impact involved identifying tobacco use as rendering young people socially undesirable. We focused on bad breath, stained teeth, and obnoxious tobacco smell on hair and clothing, all of which generally turned off others. We connected their use to degraded social standing. Our Home Page provides anti-tobacco posters and messages at www.envrc.org.

This anti-tobacco success led us to follow a similar approach to address other drug abuse. Social status became a high impact message theme in relating to stoned or drunken behavior. We used this concept in recasting our drug education messages, connecting intoxication

\(^5\)Newsweek; January 8, 2016, Page 15.
with potentially damaging social consequences. This was, and is, a result of use that they accepted and dreaded. The images were easily connected to both marijuana and alcohol use.

Some of our discussion involved violence and poor sexual decisions relating to intoxication, but the primary focus was on the reality that people often appear “dumbed-down” and unattractive when intoxicated. The fact that people can become socially ostracized through intoxicated behavior is both true and a powerful motivator for young adults to consider as they contemplate pursuing intoxication.

Another approach to this issue involved our asking adults to describe, in writing, socially inappropriate behavior they have observed by someone who was intoxicated. Specifically, we asked a group of educators or parents of students to describe in writing intoxicating behavior they had observed that degraded another person’s social status. Obviously, we required anonymity. Later, we asked students to discuss, possibly in small groups, these social dynamics.

As these socially painful experiences were discussed, we observed the students becoming serious and focused. It was clear that these real stories from real people were having impact. Few students left this exercise without absolutely connecting with the reality that using alcohol, marijuana, or other drugs can lead to serious, social stigma.

Another exercise with interesting results involved students creating personal rules or guidelines for their anticipated approach to intoxication when they became adults. Following the discussions, we asked each student to write a confidential letter to him- or herself to be opened after the age of 21. It was to describe what they hoped to have become in terms of quality of life and commenting on how intoxication may or may not fit into their lives. A trusted person could be selected by each student to mail the envelope to them when they turn 21.

It is hard to know the eventual impact, but it seemed to us that this exercise promoted the connection of students with the reality that intoxication has a dark and dangerous side which they will one day face.

The sum of a responsible educational experience in this critical area of life is to connect and communicate in ways that will protect young people.

This challenge is one of the most vital for the responsible educator.

THANK YOU FOR THE READ, AND GOOD LUCK!
Vaping: Tobacco and Marijuana

What is Vaping?

In the 1960s, the private nonprofit publication, Consumer Reports, responsibly reported what the federal government had been pressured to avoid telling the public, i.e., that tobacco was unequivocally killing hundreds of thousands of Americans a year.

The drug nicotine created an addiction, typically leading to a lifetime of compulsive tobacco use. However, it was the hot smoke containing a variety of chemicals that most seriously compromised lung tissue, not the nicotine. The hot smoke was damaging the lungs and killing millions, primarily through lung cancer.

Although nicotine itself can be toxic in highly concentrated forms and is amazingly addictive, it always had been the collateral damage from inhaling the hot smoke that was presenting the most danger.

Since then, the tobacco industry has been trying to identify at least a perceived safer pattern for customers to use nicotine. At first, they begin promoting so-called “light” cigarettes which were marketed with an image, if not the reality of safety. Presently, the “safer” response is a mass produced, easy-to-use and stylish device to deliver nicotine minus the traditional smoke—their solution is “vaping”. Or, as the Philip Morris Tobacco Company once put it, a path to “designing a smoke free future.”

Vaping involves a tool that efficiently heats a lipid or oil infused tobacco or other organic compound, especially marijuana, in a way where they will convert into an aerosol through non-combustible heat. Presumably then, the mood and mind-altering compounds in tobacco and marijuana may be experienced without inhaling hot smoke, thereby avoiding smoke-induced lung damage.

The tobacco-vaping consumer will still become addicted, potentially for life, but will significantly diminish risks associated with inhaling smoke.

The appeal for the marijuana user, who can now obtain extracted alleged marijuana compounds in oil-infused cartridges, often illegally through the Internet, is different.

Marijuana use is illegal for all underage adolescents and for adult recreational users in many states. Avoiding detection is obviously desirable both to avoid legal consequences and being stigmatized. Vaping essentially eliminates the telltale pungent scent of burning marijuana and, if observed with a vaping instrument, the marijuana use is also disguised. Significantly, the irritating discomfort of inhaling hot marijuana smoke is also reduced.

There are a number of vaping tools available, but the recently configured “vaping pen” is the most utilized and fundamental to the recent wave of vaping both marijuana and tobacco. Looking a bit like a stylish, enlarged pen, the instruments can be purchased on the internet or at a local drugstore or

Source: Shutterstock
gas station. There are many enticing designs and stylized kits that can also be purchased to personalize or convert the vaping tool into an attractive necklace or pendant. After purchasing the pen, a small battery is inserted. Then, at stores that sell tobacco products or through the internet, sets of tobacco cartridges can be purchased for insertion, heating, aerosolizing, and smokeless inhalation.

Marijuana cartridges containing THC, the psychoactive ingredient in marijuana, can be purchased on the internet with minimal effort and sold illegally to minors, or legally to adults in states that have legalized recreational use. Some, often contaminated, cartridges of a minimally intoxicating hemp product termed cannabidiol or CBD also can be purchased. Government tests have found that around 40% off the street illegal CBD cartridges were adulterated with actual marijuana or Fentanyl, an opioid associated with overdose.

The actual vaping process involves a lipid or an oil being heated to the point where it can blend with and vaporize plant extracts. The inhalation includes the oils used, often coconut oil or sometimes Vitamin E-based oils, as well as flavorings. In the case of tobacco, glycol compounds may be used and fruit or candy flavorings are sometimes incorporated. Presently, several tobacco companies have agreed to limit the use of many flavorings that would be especially appealing to underage adolescents. There have also been concerns about the potential toxicity of some of the flavoring compounds, especially when heated and introduced directly to lung tissue.

What’s Actually Going On?

The world’s major tobacco distributors have been dramatically shedding users because people, especially Americans, aren’t smoking at anything close to previous thresholds. Their long-term financial business plans involved institutionalizing the use of tobacco by young people, typically locking-in lifelong customers. Between health warnings and regulation, use has significantly decreased, especially among youth. In 1976, a little less than 30% of all senior high school students in America reported using tobacco “within the last month.” By 2016, that number was under 4% and dropping. Altria, a major tobacco corporation, reluctantly projected that use of their products would continue to decline by at least another 5% by 2023.

The profound decrease in revenues, state and federal regulation, and, particularly, civil litigation, are also taking a financial toll on tobacco providers. This regulatory and legal response is understandable considering that, in the United States alone, there are annually 480,000 deaths related to smoking tobacco. Mortality numbers are decreasing with reduced use, but past use will continue to take many lives well into the future.

The remedy was to promote a safer use pattern involving vaporizing. The process of vaporizing had been around for decades, but recently the tobacco industry designed and successfully marketed simple, appealing sets of paraphernalia for heating and vaporizing tobacco.

Modern vaporizing is quickly spreading throughout the world as a new, and potentially safer way to enjoy a plant-based intoxicant. In Japan and Switzerland, the product is identified as Ploom, in Britain, it is iFuse and in South Korea, Lil. In America, the vaping market is essentially divided between the tobacco companies Philip Morris, with its brand of vaporizer, IQOS, and Altria’s brand, identified as Juul. The Washington Post reported that with the rapid shift to vaping between 2009 and 2019, tobacconists constituted the fastest area of “Business and Job growth” in American retail.

Interestingly, Altria and Philip Morris attempted to merge and create one of the largest tobacco companies in the world, but following recent public and regulatory concerns, the attempted merger was called off.
Is Vaping Dangerous?

“Although more investigation is needed to determine the vaping agent or agents responsible, there is clearly an epidemic that begs for an urgent response.”
—Professor David Christiani, Harvard School of Public Health

The most straightforward answer to the question of risk, is that vaping should be considered less dangerous than compulsively inhaling burning tobacco in terms of lung cancer and probably several other tobacco-related health problems. However, the public health consequences are not understood and serious risk from vaping has been identified, especially involving often adulterated marijuana and CBD. Many tobacco/nicotine concerns relate to other ingredients contained in lawfully-marketed cartridges, but there are special risks regarding illegally-produced marijuana/CBD cartridges.

There is a growing body of tobacco-related vaping research, but much of it relates to heavy-dose animal studies, with a large amount of publicly released information funded with support from the tobacco industry or, historically anti-tobacco organizations. Questions involving applicability and bias are inherent in many lay publications including misinterpretations of legitimate research.

In the case of marijuana use, the unfortunate interpretation of federal marijuana criminal drug scheduling restricts a substantial amount of research regarding public health impact.

Especially in the case of vaping, we know little about the health consequences. We do know that vaping tools are being used by many for marijuana and CBD and that there have been a number of related cases of serious health consequences including hospital admissions and deaths.

There is speculation that the lipids or oils especially used to facilitate vaping THC or CBD are concurrent with and possibly causative of the serious and sometimes life-threatening lung damage.

Biopsies of lung tissue from 17 individuals who had experience lung damage post vaping marijuana and/or CBD have been analyzed by Mayo Clinic pathologists who found no trace of lipid exposure. The exact mechanism connecting vaping marijuana and CBD products containing lipids to lung damage is not understood. The connection between use and consequent disease for some users seems quite clear.

It is difficult for researchers to obtain reliable information en masse from people relating to illegal behavior, i.e., marijuana use. In states where recreational marijuana is legal, many young adults have openly admitted to using marijuana through vaping. Again, there is no solid research on the incidence and prevalence of use, but it is likely that vaping tobacco and marijuana are at, or moving toward, being institutionalized. In September 2019, the Washington Post reported that as of 2018, 37% of high school seniors had admitted to vaping within the last year.

Although the accuracy of any research regarding illegal behavior is inherently compromised, the most recent Gallup data would indicate that around 13% of American adults use marijuana with some regularity. This includes about 24% of young adults admitting to semi-regular use.

The vaping process permits more discrete use and THC or CBD cartridges can be obtained through the internet or the same institutionalized underground distribution systems that provide marijuana. It is likely that “vaping” marijuana is, or may become common, unless public health warnings or regulatory action counters the trend.
The Future of Vaping

The previous profound marketing successes in promoting tobacco use is especially ominous. The rapid adaption of the new generation of vaping paraphernalia is a signal of concern.

The tobacco industry has a history of consistently overwhelming public health information warnings through far superior marketing.

The self-reliant Marlboro Man and the engaging, masculine, cartoonish Joe Camel powerfully influenced boys and men toward tobacco use in the 70s and 80s. Yet, it was the imagery of attractive women, denoting themselves, through cigarette use, as modern and self-actualized, that had the greatest impact on cigarette use and consequent disease and death. Smoking would be a way to signal that, “You’ve come a long way baby!”

What may portend a more favorable outcome is the expressed willingness of some in the tobacco industry to discourage underage tobacco use and to actually amend their products and marketing at the request of concerned groups. While many working in public health remain cautious and inherently skeptical, perhaps we are dealing with a more responsible tobacco industry.

They likely understand that use, regulation and civil litigation are now consequences of endangering the public health.

To the extent the vaping of tobacco is used to reduce smoking, it represents a potential value; still, understanding potential risks associated with the tobacco vaping process is critical. The depressing reality of nicotine addiction and marketing acumen of the tobacco industry may represent a pending public health perfect storm.

Regarding marijuana/CBD vaping, there have been enough serious health incidents, including deaths, to warrant clear warnings relative to any marijuana and CBD vaping as we endeavor to better understand the nature of the risks.

At this point the reality is, vaping tobacco, marijuana and CBD is growing, especially among youth. Formal regulation and effective public outreach regarding risk are warranted.

Following are other publications from the Environmental Resource Council that may be of interest and can be downloaded at www.envrc.org:

- Marijuana and the Responsible Parent
- Legalization: How changes in the law might affect marijuana use among our youth
THE HISTORY OF D.A.R.E.

As Legislative changes occur regarding lawful medical use and adult recreational use of marijuana, understandable concerns regarding the still illegal use of marijuana by young adults has renewed a focus on drug education.

One of the most operationally successful, but also one of the most programmatically unsuccessful efforts designed to prevent the use and abuse of drugs was the original D.A.R.E. program.

Understanding the nature of D.A.R.E. as it was provided in the past is valuable as revised approaches to drug education are contemplated. A renewed wave of drug education needs to be created in response to liberalized marijuana laws and, learning from past mistakes, help avoid future missteps.

THE D.A.R.E. PHENOMENON

In 1983, during the height of the well-financed federal war on drugs, the Los Angeles Police Department developed a program termed, Drug Abuse Resistance Education, or D.A.R.E., which soon spread through America and other Western nations.

Essentially, the program involved trained, uniformed police officers going into elementary, middle and high schools to provide supportive skills for resisting drug use. Eventually most, possibly as many as 75%, of American school districts, institutionalized the program.

The explosive expansion of D.A.R.E. had no equal in operational success. At first, it received priority funding from various federal agencies. The Justice Department, the State Department, the Bureau of Justice, the Defense Department, and especially the U.S. Drug Enforcement Agency, virtually competed with each other to pour money into the project. In addition, the way D.A.R.E. was organized involved a sort of local franchise arrangement in many states, resulting in aggressive, entrepreneurial marketing efforts. Funding also came from state agencies, counties, cities, law enforcement, and school districts. Some states aggressively sought financial support through private donations. D.A.R.E. executives became adept at requesting funding from both large and small private businesses and foundations. It was hard not to support law enforcement officers in their efforts to “help children stay off drugs.”

Success in terms of documented public health impact was another matter. Long before the institutionalization of the program, some social policy researchers had determined that any “zero tolerance” program was unlikely to have long-term impact. The fundamental basis of D.A.R.E. was “zero”, or no
tolerance. This was the only programmatic option possible within a law enforcement culture.

Children in elementary schools, who typically had no exposure to drugs, found D.A.R.E. a positive experience. Small gifts, such as tee shirts, coloring books, etc., helped make the program popular with young children. It was less accepted among middle school students and had even less impact among the often more skeptical high school students.

Those who seemed to appreciate the program most were adults. The irony was that the greatest negative impact was arguably among the most vital group to reach—high school students. The solid support of adults, however, was and is the key to continued financial and institutional support of D.A.R.E.

An interesting fixture of the program was the “D.A.R.E. car,” typically a high-end performance car “seized” in a drug raid. Program providers were unable to explain what message the car was supposed to communicate, but participants found it interesting.

The program’s operational success eventually began to conflict with researchers’ analysis of actual results. The 1972 report from the National Commission on Marijuana and Drug Abuse had resulted in federal funding to major universities and other research organizations for evaluation of middle and high school drug education programs. By the early 1990s, these well-documented evaluations showed little or even negative impact in terms of drug use and abuse among D.A.R.E. graduates as they matured.

In 1994, the internationally respected Research Triangle Institute published a detailed analysis criticizing D.A.R.E. Shortly after that publication, the Los Angeles Times reported that D.A.R.E. had spent over $40,000 trying to prevent distribution of that research. Similarly, the Director of Publications for the American Journal of Public Health reported to USA Today that D.A.R.E. had tried to interfere with their publication of research suggesting potential psychological damage among some participants. “They tried to intimidate us,” he stated.

The director of D.A.R.E. fundraising in New York State, Ronald Rogan, publicly responded to published research that questioned D.A.R.E.’s impact on drug use/abuse over time. Instead of discussing programmatic adjustment or possible weaknesses in the research approach, he was widely quoted as saying the research was meaningless. His formal response to the researchers’ negative findings was, ‘No s___, Sherlock.” This odd public rebuff of respected researchers gave the issue a national audience for a time and rather stunned the research community, which, it is fair to say, did not quite know how to respond to Mr. Rogan.

Finally, the National Institute of Justice provided a major grant to the University of Maryland to complete a comprehensive, transparent, and unbiased assessment of existing drug education impact research. They reported, simply and clearly, “D.A.R.E. does not reduce substance use.” Soon, all federal funding was formally terminated, but the sheer popularity of the program allowed it to not only survive, but thrive. In 2001, the Surgeon General formally and publicly placed the program in a category of drug education programs labeled, “Ineffective Primary Prevention Programs.”

According to D.A.R.E. officials, the program was consistently judged unfairly by researchers. They argued that researchers were sympathetic toward legalization of marijuana, or were retaliating out of envy for D.A.R.E.’s financial success.
In some cases, D.A.R.E. does seem to have been inappropriately criticized. The New Republic was required to run a retraction of certain statements, and there always have been a substantial number of anecdotal but documented stories about the program helping individuals avoid drug use.

D.A.R.E. does not reduce substance use.
—University of Maryland

In 2007, the American Psychological Journal’s, Perspectives on Psychological Science, published that D.A.R.E. had the potential to “harm” its participants. At that point, D.A.R.E. began to refocus its approach, and it is now described as being more geared to connecting with older students and is more culturally diverse. Recently, D.A.R.E. has developed a program variation called, “Keeping it Real,” in which somewhat limited clinical trials seem to demonstrate positive impact, particularly among multi-cultural groups. At this point (2017), we cannot quantify the revised program’s impact on drug use or abuse. As always, it remains popular among young children and adults, but the academic community is generally skeptical.

One of the most controversial aspects of the program relates to the introduction of what could be termed a “law enforcement culture” within the school. As an example, children have been encouraged to act as informants. There are a number of documented and, in some cases, widely publicized cases in which children reported their parents’ marijuana possession to law enforcement, leading to arrest of the parents. In terms of civics, this was problematic to many and, by most standards, outside a school district’s traditional role in the community.

A particularly dramatic case in Colorado involved a 10-year old boy reporting his parents for marijuana possession, assuming the police would explain the dangers of marijuana use to his parents, as they had done in his classroom. Instead, his action resulted in an aggressive public arrest of his parents, and the boy’s tearful separation from them and temporary placement in foster care. It has been speculated that this highly publicized case influenced Colorado’s becoming the first state to legalize recreational marijuana use by adults.

Given the legalization of marijuana use in some states among adults, our sense is that there will likely be a renewed focus on providing drug education outreach programs to prevent the still illegal use of marijuana among young people. Our understanding is that D.A.R.E. providers are preparing to take advantage of increased public concern and marijuana sales-generated public revenue to support their revised programs.

Over a decade ago, we published a detailed assessment and evaluation of Minnesota D.A.R.E. We were told that our findings helped guide the development of school districts’ approaches to drug education, both in how they used or decided not to use D.A.R.E. We believe our basic findings, although dated, may still provide insight.

…children have been encouraged to act as informants.

The Minnesota Attorney General actively chaired our “D.A.R.E. Advisory Council,” in which drug educators as well as practicing D.A.R.E. officers participated, along with representatives from the treatment community, parent groups, and State Commissioners or representatives of Health and Human Services and Public Safety Departments.
We were given adequate resources to conduct a detailed assessment of past research and to conduct original surveys regarding the impact of D.A.R.E. and other drug education programs. We were never subjected to outside pressure to influence our research, analysis or findings. We also had the advantage, through our drug education classes, of interacting with thousands of young people who had been arrested for possessing a small amount of marijuana, most of whom had participated in D.A.R.E. There were several key findings:

**D.A.R.E. did not prevent drug use among older students**

A preponderance of national, academically-accredited research, supported by our interaction with young, small amount violators, made it clear that D.A.R.E. of that period did not prevent substance use or abuse among older student populations.

**D.A.R.E. is popular and promotes good relations between law enforcement and schools**

The acceptance and appreciation for D.A.R.E. among the general adult community has been strong. One interesting finding was that a substantial minority of surveyed school superintendents indicated that even if D.A.R.E. did not prevent substance use or abuse, they would keep the program because of positive community support and improved law enforcement interaction.

**D.A.R.E. or other such programs should reach out to parents**

A significant majority of school administrators, school board members, teachers, chemical health coordinators, parent organization representatives, and especially local law enforcement, wanted D.A.R.E. strengthened in reaching out to parents. There was consensus that the determining factor in attitudes regarding substance use and abuse by students related to interaction with parents. This opinion is clearly supported by research.

Perhaps the most important lesson of the D.A.R.E. experience is that the public appeal of a drug education program can be at a mismatch with approaches more likely to protect and help young people. Thoughtful evaluation of drug education programs is necessary, with a focus on realistically connecting with and safeguarding students.
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